Plumas National Forest

Terrestrial and Aquatic Wildlife

Biological Assessment/Biological Evaluation

Forest Service Species of Concern
Management Indicator Species Report
Migratory Bird Species Report

PROJECT NAME: Strawberry Wildfire Resilience Project
FOREST, DISTRICT: Plumas National Forest**,** Feather River RD
LOCATION: The area is located west and southwest of La Port and approximately 15 miles northeast of Challenge CA: Diamond Springs Hill T21N, R8E, S 25, 26, 36 Strawberry Station T20N, R8E, S 13, 20, 22, 27; Road 20N04 T19N, R7E, S 1, 12; T 19N, R8E, S 5, 6; T 20N R8E S 32. (USGS 7.5 minute topographic quadrangle maps: American House Strawberry, and Valley Clipper Mills).

SUMMARY

California spotted owl
Limiting Operating Period March 1 – August 15 for units 7, 8, 9, 10 and 11.

Prescriptions are not within California Spotted Owl protected activity centers (PACs).

Units 7, 8, 9, 10, and 11 are in a home range core area (HRCA) bordering a PAC. During survey efforts, an owl pair was found foraging in and around units 7, 8, 9, 10 and 11.

Apply a limiting operating period (LOP) from March 1 – August 15 for units 7, 8, 9, 10 and 11. If the purchaser does not move forward with the thinning project prior to 2023, units 7, 8, 9, 10 and 11 requires resurveying the area. The owls were found using the units more often than the PAC and it is possible the owls could nest in or near the units.

Home Range Core Areas (HRCAs)
Prescriptions in HRCAs are approximately 200 acres. Where existing vegetative conditions permit, design projects to retain at least 50 percent canopy cover averaged within the treatment unit. (SNFPA FEIS ROD 2004).

Design projects to avoid reducing pre-existing canopy cover by more than 30 percent within the treatment unit. Percent is measured in absolute terms (for example, canopy cover at 70 percent should not be reduced below 50 percent (SNFPA FEIS ROD 2004).

Stream Buffers
Foothill yellow-legged frog
Hampshire Creek a perennial stream runs through unit 4. No mechanical treatment within the buffer zone of 25-meter buffer (e.g. equipment exclusion zone). This includes no

reaching in within the zone to remove felled trees. Trees that are felled with the buffer zone shall be felled toward the stream.

Hand cutting within the entire stream allocation area regardless of the type of stream will be allowed.

Burn piles may be ignited independent of an under burn. Piles should be at least 25 feet from the edge of stream bank. Hand cutting conifers up to 10 inches in DBH applies across the entire project regardless if it's in or out of an RCA.

Underburn's will be allowed within the RCAs. Fire will be ignited no closer than 150 ft. away from any stream, spring, and meadow. Underburn's will be allowed to back into these features under the ideal conditions. Under burning in this project is a secondary or third treatment type.

INTRODUCTION

The Feather River Ranger District (FRRD) on the Plumas National Forest (PNF) is proposing a Strawberry Wildfire Resilience Project, that here forward will be referred to as Strawberry project. The project area is approximately 445 acres. Refer to Figure 1.

The Strawberry project activities are proposed to be categorically excluded from documentation in an environmental assessment (EA) or an environmental impact statement (EIS) because there are no anticipated extraordinary circumstances potentially having effects which may significantly affect the environment and fits into established categories excluded from documentation in an EA or EIS.

DESCRIPTION OF PROJECT

Proposed Activities

The forest types include: Most of the area is comprised of Sierra mixed conifer forest (*Abies concolor, Pseudotsuga menziesii, Pinus ponderosa, Pinus lambertiana, Calocedrus decurrens, Abies magnifica, Quercus kelloggii, Arbutus menziesii* and *Notholithocarpus densiflorus).*

Prescriptions are mechanical thinning with biomass removal in the 445 acres minus the 88-feet (3.9 acres) stream buffer along Onion Creek. Mastication, hand cutting (≤ 10" DBH size trees or brush) and prescribed fire, referred to as service work will occur in all acres and sometime in the future post- implementation of mechanical thinning and bio mass removal activities. Piles of brush will be piled and burned outside of the buffer. Piles should be at least 25-feet from the edge of stream bank.

Mechanical thinning will occur in stands that are overstocked, have poor regeneration, have high fuel loading, and or displaying signs of disease. Thinning areas will be subject to biomass removal of trees ≤ 10" diameter at breast height (DBH) and grapple pile. Service work includes the removal of small ≤ 10" DBH size trees or brush by either masticating or hand cutting and prescribed fire.

Categories of Species Evaluated

The Biological Evaluation (BE) is prepared to determine whether the proposed action would result in a trend toward listing or loss of viability for Forest Service Sensitive Species, Management Indicator Species and or Migratory Bird Species.

Collectively, consideration was given to three categories of wildlife species in an evaluation process to determine project impacts to their habitat: **Forest Service Sensitive Species, Management Indicator Species, and Migratory Bird Species.**

Forest Service Sensitive Species

Forest Service Sensitive Species are those species, generally federal Candidates for listing or Species of Concern, that have been designated by the Forest Service as needing special management attention because of viability concerns. The Forest Service manages

for these species to ensure they will not require listing as Threatened or Endangered. Refer to Appendix A.

Management Indicator Species

Management Indicator Species are used because their population changes are believed to indicate whether management activities are influencing the viability and diversity of animal and plant communities.

The purpose of this report is to evaluate and disclose the impacts of the proposed action on the habitat of the eleven (11) Management Indicator Species (MIS) identified in the Plumas National Forest Land and Resource Management as amended by the 2007 Sierra Nevada Forests Management Indicator Species Amendment Record of Decision. The current bioregional status and trend of populations and/or habitat for each of the MIS is discussed in the 2010 Sierra Nevada Forests Bioregional Management Indicator Species (SNF Bioregional MIS) Report (USDA Forest Service 2010). Refer to Appendix B for the species list.

Migratory Bird Species

Under the National Forest Management Act (NFMA), the Forest Service is directed to "provide for diversity of plant and animal communities based on the suitability and capability of the specific land area to meet overall multiple-use objectives." (P.L. 94-588, See 6 (g) (3) (B)). The January 2000 USDA Forest Service Landbird Conservation Strategic Plan, followed by Executive Order 13186 in 2001, in addition to the Partners in Flight (PIF) specific habitat Conservation Plans for birds and the January 2004 PIF North American Landbird Conservation Plan all reference goals and objectives for integrating bird conservation into forest management and planning.

In late 2008, a Memorandum of Understanding between the USDA Forest Service and the US Fish and Wildlife Service to Promote the Conservation of Migratory Birds was signed. The intent of the MOU is to strengthen migratory bird conservation through enhanced collaboration and cooperation between the Forest Service and the Fish and Wildlife Service as well as other federal, state, tribal and local governments. Within the National Forests, conservation of migratory birds focuses on providing a diversity of habitat conditions at multiple spatial scales and ensuring that bird conservation is addressed when planning for land management activities.

The Plumas National Forest utilizes the U.S. Fish & Wildlife Service 2008 Birds of Conservation Concern for the Sierra Nevada as its framework for analyzing effects to migratory birds. Of this list of eleven (11) birds, project level reports (e.g. Biological Assessment/Biological Evaluation (BA/BE), Management Indicator Species Report (MIS) address nine (9) of the species either directly or by using a surrogate species that utilize the same or similar habitat attributes. The eleven migratory birds are addressed directly or by using a surrogate species.

Although some actions may have short-term adverse effects on some individual birds, we do not expect adverse effects at the population level. Potential adverse effects to migratory bird species have been minimized through the adherence of LRMP Standards

and Guidelines including: riparian buffers; limited ground disturbance such as in the California spotted owl PAC; maintenance of canopy closure; snag/down woody debris retention and other measures. Refer to Appendix C for the species list.

MANAGEMENT DIRECTION

Decision Framework

- Code of Federal Regulations (36&50CFR)
- Forest Service Manual and Handbooks (FSM/H 2670)
- National Forest Management Act (NFMA: 1976)
- Endangered Species Act (ESA: 1976)
- National Environmental Policy Act (NEPA: 1969)
- Migratory Bird Treaty Act of 1918 as amended (MBTA)
- Plumas National Forest Land and Resource Plan (LRMP: 1988)
- Sierra Nevada Forest Plan Amendment FSEIS and ROD (SNFPA: 2004)
- Regional Forester policy and management direction
- Species - Recovery Plans which establish population goals for recovery
- Species - management plans
- Species - management guides or conservation strategies

Management Requirements

C-Clauses

- C6.24-B6.24 - Protection of Habitat of TEPS Species (10/78): Location of areas needing special measures for protection of animals (or plants) as Threatened, Endangered, Proposed or species under the ESA of 1973 and R5 Sensitive Species are shown on map and or discussed in this document. If protection measures prove inadequate, if other such areas are discovered, or if new species are listed on the Endangered Species List, FS may either cancel under C8.2 or unilaterally modify this contract to provide additional protection regardless of when such facts become known. Discovery of such areas by either party shall be promptly reported to the other party.

- CT6.313 - Limited Operating Period (1/84): Except when agreed otherwise, Purchaser's operations shall be “limited” as described within this document.

- C6.7 – C6.705 Logs not meeting utilization standards shall be used to meet the Land and Resource Management Plan as amended requirements. Logs should be evenly distributed within the units (stands) to the extent possible.

- If new TEPS species are listed or discovered within an area in which they may be adversely affected by activities, protection measures such as LOPs will be implemented as recommended by a qualified biologist, as appropriate for the species.

The dates and reason for delaying harvest should be included in C6.313 Limited Operating (1/84), or other language that is appropriate for the type of contract.

Riparian Management Zones

Riparian Conservation Areas (RCAs) as appropriate, assess and document aquatic conditions following the Regional Stream Condition Inventory protocol prior to implementing ground disturbing activities.

RCA widths were adjusted at the project level and landscape analysis has been completed and a site-specific Riparian Conservation Objectives (RCO) analysis demonstrates a need for different widths which did occur for this project.

Hampshire Creek is a perennial stream at a 3,400 feet elevation and runs through unit 4. The stream terminates 2,000 feet elevation at the Yuba River that flow into Bullard's Bar. There is a 25-meter protection buffer with no removal of trees is allowed.

Onion Creek is a perennial stream near Diamond Springs at 4,500 to 4, 400 feet elevation and not in the action area. The distance from the closet unit to Onion Creek is 88-meters and furthest 100-meters. Therefore, there are no issues or restrictions for units near Onion Creek. Refer to Figure 2.

No mechanical treatment with the buffer zone of 25-meter buffer (e.g. equipment exclusion zone). This includes no reaching in within the zone to remove felled trees. Trees that are felled with the buffer zone shall be felled toward the stream. Hand cutting within the entire stream allocation area regardless of the type of stream will be allowed. Burn piles may be ignited independent of an underburn. Piles should be at least 25 feet from the edge of stream bank. Hand cutting would be allowed up to the meadows perimeter and within. Piles maybe piled within the meadow. Hand cutting up to the springs will be allowed but the piles should be 25 feet away. Hand cutting conifers up to 10 inches in DBH applies across the entire project regardless if it's in or out of an RCA.

Under burning will be allowed within the RCAs. Fire will be ignited no closer than 150 ft. away from any stream, spring, and meadow. Underburn's will be allowed to back into these features under the ideal conditions. Under burning in this project is a secondary or thirdly treatment type.

Large Woody Material on Forest Floor and Standing Snags

Large Woody Material

The desired number of logs per acre is 10 tons (SNFPA ROD 2004) that equates to 5 per acre at least 20 inches in diameter and 10 feet long, but need to be at least 12 inches in diameter (contract clause C6.705).

Downy large woody material (LWM) retention levels are determined on an individual project basis, based on desired conditions. Emphasizes is the retention of wood in the

largest size classes and in decay classes 1, 2, and 3 (1-freshly fallen, 2-sound log original color of wood, 3-center is still sound supporting its own weight, 4-wood is rotten unable to support its own weight, 5 there is no remaining structural integrity) (USDA 2007, Wound Enberg et al. 2010).

Logs on the forest floor provide shelter for animals of many sizes, such as bear and turkey vultures at the large end of the spectrum, and mice, salamanders, lizards, toads, and frogs at the small end. The high humidity inside and beneath decaying logs offers moist conditions that help wet-skinned amphibians stay wet (Swanson et al. 1976). The upper sides of logs are used by animals as platforms for basking in the sun. Small mammals such as voles and shrews use the interior of logs as nest sites and as places to hide from predators (Maser et al. 1979).

Snags

The goal is to retain 4 of snags per acre (SNFPA ROD 2004). Snags are important and require different kinds of trees to develop cavities at different stages. In hardwood trees cavities often form while the tree is alive. In conifers cavities are more likely to form after trees die. Snags provide primary cavity excavators with homes which provide homes for secondary cavity users (Jackman 1974; Raphael and White 1984; Scott et al. 1980). When determining snag retention levels and locations, consider land allocation, desired condition, landscape position, potential prescribed burning and fire suppression line locations, and site conditions (such as riparian areas and ridge tops), avoiding uniformity across large areas.

Besides retaining snags, also retain some mid- and large diameter live trees that are currently in decline, have substantial wood defect, or that have desirable characteristics (teakettle branches, large diameter broken top, large cavities in the bole) to serve as future replacement snags and to provide nesting structure.

EXISTING ENVIRONMENT AND EFFECTS

Species List

Appendix B, C and D contains a list of Sensitive (TEPCS) species, Management Indicator Species (MIS) and Migratory Birds that potentially occur on the PNF and may be addressed in this report.

Analysis Area

For the purposes of this project, the wildlife analysis area is the proposed project area. The Forest Service land is surrounded by the urban environment scattered with private owned land and industry owned land.

Field Reconnaissance

Surveys focused on the Forest Service sensitive species (FSSS) the California spotted owl (*Strix occidentalis occidentalis*), and the Foothill yellow-legged frog (*Rana boylii*) known

to occur in the area. There have been surveys under the other projects within the same area. The biologists are familiar with the area. The Forest Service data base NRIS was used to verify previous known locations.

California Spotted Owl. Protocol-level surveys were not done due to time contrarians and lack of staff. Even so the confidence level of results from surveys completed is high. Surveys occurred over two-year season (2019-2020) and focused on units bordering an established PAC and the PAC. The pair were found mostly in and around the units rather than their PAC. This could be due to the extreme modification to the PAC several years prior when two landings (clear cuts) were mistakenly put in the PAC where the birds had been known to nest and at the same time the home range core area (HRCA) bordering the PAC to the north was being thinned to 40% canopy cover from a 75% canopy converting it to marginal foraging habitat.

The surveys final determination is that the pair is not nesting within the proposed units.

Foothill yellow-legged frog. Hampshire Creek is a perennial stream and was surveyed through the unit (4) including 500 feet downstream. Surveys focused on adults, sub adults and tadpoles and included walking the entirety of those areas. Surveys for post-metamorphic individuals focused on the surface of the ground, rocks, or at the water's edge. No frogs were detected.

Onion Creek is a perennial stream near Diamond Springs at 4,500 to 4, 400 feet elevation and not in the action area. The distance from the closet unit to Onion Creek is 88-meters and furthest 100-meters. Surveys of Onion Creek consistently have found Foothill yellow-legged frogs (FYLF) (*Rana boylii)* during the last 20-years of surveying efforts.

DETERMINATION OF EFFECTS:

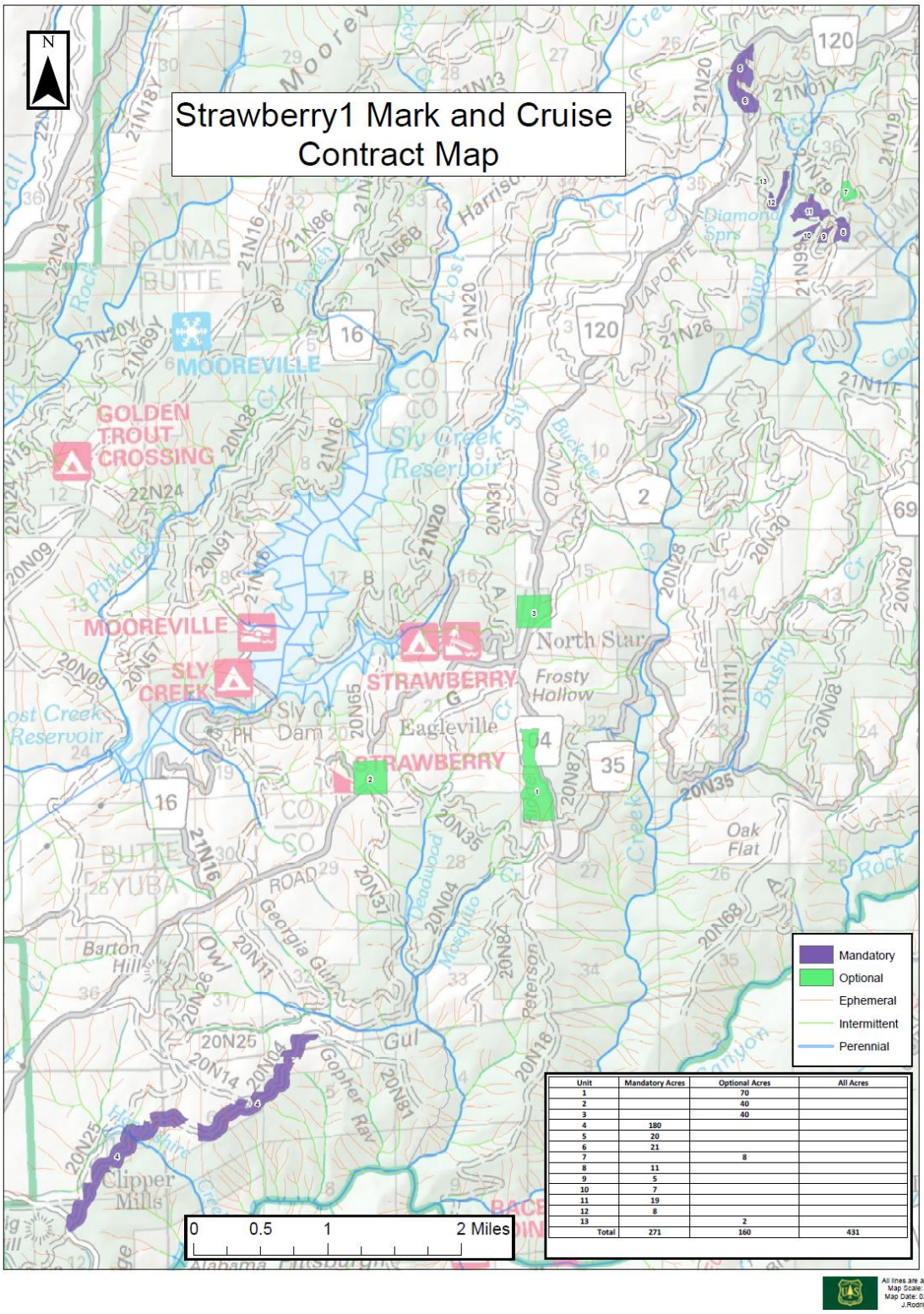
The determinations are based on the implementation of mitigations or protection measure identified above.

California spotted owl
The determination is based on the type and degree of proposed activities in the HRCA which may be affect individuals and will reduce nesting habitat, but would not lead toward a trend of federally listing.

Foothill yellow-legged frog
The determination finds that based on the type and degree of proposed activities near streams there would be no effect.

Refer to Appendix A, B and C for the determinations for other species considered.

Prepared by: Jo Anna Arroyo **Date:** 10/28/2020
District Wildlife and Aquatic Biologist



Unit	Mandatory Acres	Optional Acres	All Acres
1		70	
2		40	
3		40	
4	180		
5	20		
6	21		
7		8	
8	11		
9	5		
10	7		
11	19		
12	8		
13		2	
Total	271	160	431

Figure 1. Strawberry Wildfire Resilience Project area units and acres.

APPENDIX A

Forest Service Sensitive Species that potentially occur on the Plumas National Forest and determinations

Threatened, Endangered and Sensitive Species (Scientific Name)	Species Status*	Habitat or Ecosystem Component	Category for Project Analysis**	Determinations
Invertebrates				
Fish				
Hardhead minnow (*Mylopharodon conocephalus*)	USFS : S	Riverine and Lacustrine	1	WNA
Amphibians				
Foothill yellow-legged frog (*Rana boylii*)	USFS : S, DFG : SSC	Riverine and Lacustrine	1	WNA
Northern leopard frog (*Rana pipiens*)	USFS : S, DFG : SSC	Riverine and Lacustrine	1	WNA
Reptiles				
Northwestern pond turtle (*Clemmys marmorata marmorata*)	USFS : S, DFG : SSC	Riverine and Lacustrine	1	WNA
Birds				
Bald eagle (*Haliaeetus leucocephalus*)	USFS : S, SE, USFWS : BCC	Large trees adjacent to riverine and lacustrine	1	WNA
California spotted owl (*Strix occidentalis occidentalis*)	USFS : S, USFS : MIS, DFG : SSC, USFWS : BCC	Late Seral Closed Canopy Coniferous Forest	3	MAI
Greater sandhill crane (*Grus canadensis tabida*)	USFS : S, ST	Prefers open habitats (grasslands and croplands) with shallow lakes and fresh emergent wetlands	1	WNA
Great gray owl (*Strix nebulosa*)	USFS : S, SE	Late Seral Closed Canopy Coniferous Forest adjacent to wet meadows	1	WNA
Northern goshawk (*Accipiter gentilis*)	USFS : S, DFG : SSC	Late Seral Closed Canopy Coniferous Forest	1	WNA
Swainson's hawk (*Buteo swainsoni*)	USFS : S, DFG : SSC	Open desert, grassland or cropland containing scattered, large trees or small groves	1	WNA
Willow flycatcher (*Empidonax traillii brewsteri*)	USFS : S, SE, USFWS : BCC	Riparian with dense willows	1	WNA
Mammals				
American marten (*Martes americana*)	USFS : S	Late Seral Closed Canopy Coniferous Forest	1	WNA

Threatened, Endangered and Sensitive Species (Scientific Name)	Species Status*	Habitat or Ecosystem Component	Category for Project Analysis**	Determinations
California wolverine (*Gulo gulo luteus*)	USFS : S, ST	Late Seral Closed Canopy Coniferous Forest	1	WNA
Pacific fisher (*Martes pennanti pacifica*)	FC, USFS : S, DFG : SSC	Late Seral Closed Canopy Coniferous Forest	1	WNA
Pallid bat (*Antrozous pallidus*)	USFS : S, DFG : SSC	Most common in open, dry habitats with rocky areas (rocky outcrops, cliffs and crevices)	1	WNA
Sierra Nevada red fox (*Vulpes vulpes necator*)	USFS : S, ST	Late Seral Closed Canopy Coniferous Forest	1	WNA
Townsend's big-eared bat (*Corynorhinus townsendii*)	USFS : S, DFG : SSC	Mesic Habitats	1	WNA
Fringe-tailed myotis (*Myotis thysanods*)	USFS-S	Sangs, caves, mines, crevices in rocks. Nearby water. Oaks and pinyon woodlands	1	WNA
Invertebrates				
Bumble bee (*Bombus occidentallis)*	USFS-S	Its short proboscis limits flower species with short corolla lengths	1	WNA

***Species Status:** **FE** = Federal Endangered, **FT** = Federal Threatened, **FP** = Federal Proposed, **FC** = Federal Candidate,
USFS: S = U.S. Forest Service - Sensitive, **USFS: MIS** = U.S. Forest Service – Management Indicator Species, **SE** = State Endangered,
ST = State Threatened, **DFG: FP** = State Fully Protected, **DFG: SSC** = State Species of Special Concern,
USFWS: BCC = U. S. Fish and Wildlife Service Birds of Conservation Concern, **SOI** = Species of Interest.
** **Category 1:** Species whose habitat is not in or adjacent to the wildlife analysis area and would not be affected by the project.
Category 2: Species whose habitat is in or adjacent to the wildlife analysis area, but would not be either directly or indirectly affected by the project.
Category 3: Species whose habitat would be either directly or indirectly affected by the project.
***Determinations:** **T, E & P Species: WNA** = Will Not Affect, **MAINLA** = May Affect but Is Not Likely to Adversely Affect Individuals or their designated critical habitat, **MAILAA** = May Affect and Is Likely to Adversely Affect Individuals or their designated critical habitat.
FS Sensitive Species: WNA = Will Not Affect, **MAI** = May Affect Individuals, but is not likely to result in a trend toward Federal listing or loss of viability, **MAILRTFL** = May Affect Individuals, and is Likely to Result in a Trend toward Federal Listing or loss of viability.

APPENDIX B

Management Indicator Species for Project-Level Habitat Analysis

Habitat or Ecosystem Component	CWHR Type(s) defining the habitat or ecosystem component*	Sierra Nevada Forests Management Indicator Species (Scientific Name)	Species Status**	Category for Project Analysis ***
Early Seral Coniferous Forest	Douglas-fir (DFR), Eastside Pine (EPN), Jeffrey Pine (JPN), Lodgepole Pine (LPN), Ponderosa Pine (PPN), Red Fir (RFR), Sierran Mixed Conifer (SMC), Subalpine Conifer (SCN), White Fir (WFR), tree sizes 1, 2, & 3, all canopy closures	Mountain quail (*Oreortyx pictus*)	USFS : MIS	2
Mid Seral Coniferous Forest	Douglas-fir (DFR), Eastside Pine (EPN), Jeffrey Pine (JPN), Lodgepole Pine (LPN), Ponderosa Pine (PPN), Red Fir (RFR), Sierran Mixed Conifer (SMC), Subalpine Conifer (SCN), White Fir (WFR), tree size 4, all canopy closures	Mountain quail (*Oreortyx pictus*)	USFS : MIS	2
Late Seral Open Canopy Coniferous Forest	Douglas-fir (DFR), Eastside Pine (EPN), Jeffrey Pine (JPN), Lodgepole Pine (LPN), Ponderosa Pine (PPN), Red Fir (RFR), Sierran Mixed Conifer (SMC), Subalpine Conifer (SCN), White Fir (WFR), tree size 5, canopy closures S and P	Sooty grouse (*Dendragapus obscurus*)	USFS : MIS	1
Late Seral Closed Canopy Coniferous Forest	Douglas-fir (DFR), Eastside Pine (EPN), Jeffrey Pine (JPN), Lodgepole Pine (LPN), Ponderosa Pine (PPN), Red Fir (RFR), Sierran Mixed Conifer (SMC), Subalpine Conifer (SCN), White Fir (WFR), tree size 5 (canopy closures M and D), and tree size 6.	California spotted owl (*Strix occidentalis occidentalis*)	USFS : S, USFS : MIS, DFG : SSC, USFWS : BCC	3
		Northern flying squirrel (*Glaucomys sabrinus*)	USFS : MIS	
Oak-associated Hardwood & Hardwood/conifer	Montane Hardwood (MHW), Montane Hardwood-Conifer (MHC)	Mule deer (*Odocoileus hemionus*)	USFS : MIS	1
Riparian	Montane Riparian (MRI), Valley Foothill Riparian (VRI)	Yellow warbler (*Dendroica petechia*)	USFS : MIS, DFG : SSC	1
Riverine & Lacustrine	Riverine (RIV), Lacustrine (LAC)	Aquatic macroinvertebrates	USFS : MIS	1

Habitat or Ecosystem Component	CWHR Type(s) defining the habitat or ecosystem component*	Sierra Nevada Forests Management Indicator Species (Scientific Name)	Species Status**	Category for Project Analysis ***
Shrubland (west-slope chaparral types)	Montane Chaparral (MCP), Mixed Chaparral (MCH), Chamise-Redshank Chaparral (CRC)	Fox sparrow (*Passerella iliaca*)	USFS : MIS	1
Snags in Burned Forest	Medium and large snags in burned forest (stand-replacing fire)	Black-backed woodpecker (*Picoides arcticus*)	USFS : MIS	1
Snags in Green Forest	Medium and large snags in green forest	Hairy woodpecker (*Picoides villosus*)	USFS : MIS	3
Wet Meadow	Wet Meadow (WTM), Freshwater Emergent Wetland (FEW)	Pacific chorus frog (*Pseudacris regilla*)	USFS : MIS	1

*All CWHR size classes and canopy closures are included unless otherwise specified; dbh = diameter at breast height;
1 = Seedling Tree <1" dbh, **2 =** Sapling Tree 1 - 6" dbh, **3 =** Pole Tree 6 - 11" dbh, **4 =** Small Tree 11 - 24"dbh, **5 =** Medium/Large Tree >24"dbh, **6 =** Multi-layered Tree. **D =** Dense Canopy Cover (> 60%), **M =** Moderate Canopy Cover (40 - 59%), **P =** Open Canopy Cover (25 – 39%), **S =** Sparse Canopy Cover (10 – 24%) (Mayer and Laudenslayer 1988).
****Species Status: FE** = Federal Endangered, **FT** = Federal Threatened, **FP** = Federal Proposed, **FC** = Federal Candidate,
USFS: S = U.S. Forest Service - Sensitive, **USFS: MIS** = U.S. Forest Service – Management Indicator Species, **SE** = State Endangered,
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APPENDIX C

Migratory Birds for Project-Level Habitat Analysis

Birds of Conservation Concern (Sierra Nevada - BCR 15) Species (Scientific Name)	Species Status*	Forest Service Sensitive Species (S) or Management Indicator Species (MIS)	Project Level Report (BA/BE or MIS)	Critical Habitat component or threat as defined by Sierra Nevada Bird Conservation Plan (PIF)	Category for Project Analysis**
American peregrine falcon (*Falco peregrinus anatum*)	SE, USFWS : BCC	See Below	N/A	Bodies of water in open areas with protected cliffs, canyons and ledges for cover and nesting	1
Bald eagle (*Haliaeetus leucocephalus*)	USFS : S, SE, USFWS : BCC	Bald Eagle (S)	BA/BE	Designated as a non-land bird by DeSante	1
Black swift (*Cypseloides niger*)	USFWS : BCC	See Below	N/A	Wet cliff, waterfalls	1
California spotted owl (*Strix occidentalis occidentalis*)	USFS : S, USFS : MIS, DFG : SSC, USFWS : BCC	California Spotted Owl (S)	BA/BE	Depends critically on old growth	3
Calliope Hummingbird (*Stellula calliope*)	USFWS : BCC	Sooty (Blue) Grouse (MIS) Yellow Warbler (MIS) Willow Flycatcher (S)	MIS MIS BA/BE	Open Forested habitats, and moist habitats on the East Slope	1
Cassin's Finch (*Carpodacus cassinii*)	USFWS : BCC	California Spotted Owl (S)	BA/BE	Depends critically on old growth	3
Flammulated Owl (*Otis flammeolus*)	USFWS : BCC	Mule Deer (MIS) Hairy Woodpecker (MIS)	MIS MIS	Depends critically on oaks or oak woodlands, Loss of snags	1
Lewis' woodpecker (*Melanerpes lewis*)	USFWS : BCC	Hairy Woodpecker (MIS)	MIS	Loss of snags	1
Olive-sided flycatcher (*Contopus cooperi*)	DFG : SSC, USFWS : BCC	California Spotted Owl (S) Hairy Woodpecker (MIS)	BA/BE MIS	Utilize late successional/old growth forest, but does not depend on it critically, Loss of snags	1
Williamson's sapsucker (*Sphyrapicus thyroideus*)	USFWS : BCC	Hairy Woodpecker (MIS)	MIS	Loss of snags	1
Willow flycatcher (*Empidonax traillii brewsteri*)	USFS : S, SE, USFWS : BCC	Willow Flycatcher (S)	BA/BE	Depends critically on montane meadow habitat	1

***Species Status:** **FE** = Federal Endangered, **FT** = Federal Threatened, **USFS: S** = U.S. Forest Service - Sensitive, **USFS: MIS** = U.S. Forest Service – Management Indicator Species, **SE** = State Endangered, **ST** = State Threatened, **DFG: FP** = State Fully Protected, **DFG: SSC** = State Species of Special Concern, **USFWS: BCC** = U. S. Fish & Wildlife Service Birds of Conservation Concern, **SOI** = Species of Interest.

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